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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/802,732	03/09/2001	Trudy D. Stetzler	TI-31226	7653
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TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			TRINH, TAN H	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/802,732	STETZLER ET AL.
	Examiner TAN TRINH	Art Unit 2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 09 March 2001.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-53 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-31 and 35-53 is/are rejected.
 7) Claim(s) 32-34 is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 28 June 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____

DETAILED ACTION

Allowable Subject Matter

1. Claims 32-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Reasons for allowance

2. The following is an examiner's statement of reasons for allowance:

Regarding claims 32 and 34, the reference of Goken and the prior art fail to teach the method as recited in claim 30 further comprising; scanning the broadcast spectrum with the second receiver train; generating a program schedule; and storing the schedule in the storage unit, wherein the program schedule has program components with predetermined criteria; and scanning the broadcast spectrum with the second receiver train; and when the indicia in the new second signal stream meet preselected criteria, applying the new first signal stream to the interface unit, as cited in claims 32 and 34.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-31 and 35-43, 45-46, 49-50 and 53 are rejected under 35 U.S.C. 102(b) based upon a public use or sale of the invention. Goken (U.S. Patent No. 5584051).

Regarding claims 1 and 24, Goken teaches a digital radio receiver (see figs. 1A-B), the digital radio receiver comprising: a first receiver train (see fig. 1a-b, receiver 5), the first receiver train including: an antenna (see fig. 1b, antenna 1); a tuner coupled to the antenna for selecting a broadcast frequency (see figs. 1a-b, tuner 2, coupled to the antenna 1); an analog-to-digital converter coupled to the tuner (see figs. 1a-b, A-D converter on item 5 coupled with tuner 2a); a demodulator coupled to the analog-to-digital converter (see fig. 1b, demodulator and A-D converter on item 5); a storage unit (see fig. 1b, item 15); a interface unit (see fig. 1a, input/output control 4 and 11, and fig. 4, interface 22); and a processor coupled to the demodulator (see figs. 1a-b, processor 3), the processor separating two signal streams transmitted at the broadcast frequency (see figs. 1a-b, processor separating two input signal streams to receiver 5 and 6, and processor separating two output signal to display 10 for traffic/program information and speaker 16 for audio signal), the first signal stream including program components (see col. 7, lines 10-col. 8, line13), the second signal stream including indicia of the program components of the first signal stream (see figs. 1a-b, col. 8, lines 14-64).

Regarding claims 13 and 30, Goken teaches the radio receiver further comprising: a second receiver train (see fig. 1a-b, receiver 6): the second receiver train including: a scannable tuner coupled to the antenna for selecting a second broadcast frequency (see fig. 1b, tuner 2b with conventionally, since it is conventional turner then it is inherently scan-able), the frequency of the scannable tuner determined by the processor (see fig. 1b, col. 7, lines 9-46); a second

analog-to-digital converter coupled to the tuner (see fig. 1b receiver section Demod & RDS decoder 6, since the RDS decoder is inherently has a A-D converter); and a second demodulator coupled to the second analog-to-digital converter (see fig. 1b item 6), the output signal of the second demodulator being applied to the processor (see fig. 1b , demodulator 6 and processor 3), the processor separating the second frequency signal into a new first signal stream and a new second signal stream (see figs. 1a-b, processor separating two input signal streams to receiver 5 and 6, and processor separating two output signal to display 10 for traffic/program information and speaker 16 for audio signal), wherein the new first signal stream includes program components, the new second signal stream including indicia of the new first signal program components (see figs. 1a-b, col. 8, lines 14-64).

Regarding claim 2, Goken teaches wherein the processor uses the program indicia in the second signal stream to process the first signal stream (see col. 8, lines 21-31).

Regarding claim 3, Goken teaches wherein the tuner is a wideband tuner for receiving signals from all stations in the broadcast band (Since the tuner is turning from AM, FM-VHF and DAB of the multi-band, so that the tuner is a wideband tuner, see col. 4, lines 32-35).

Regarding claim 4, Goken teaches wherein signal streams for multiple stations can be decoded to identify and process indicia related to program components or other information (see col. 4, lines 36-55).

Regarding claim 5, Goken teaches wherein the program indicia identifies categories of program components in the first signal stream (see col. 6, line 62-col. 7, line 35).

Regarding claims 6 and 26, Goken teaches wherein the program indicia of the second signal stream identifies program components in the first signal stream (see figs. 1a-b, col. 8, lines 14-64).

Regarding claims 7 and 15, Goken inherently teaches wherein the program indicia of the second signal stream identifies a schedule for all program components in the receiver area (see col. 8, line 65-col. 10, line 44).

Regarding claims 8, 19 and 25, Goken teaches wherein the program indicia of the second signal stream identifies a schedule of program components in the first signal stream (see col. 3, lines 6-54).

Regarding claims 9, 16 and 28, Goken teaches wherein the second signal stream includes information selected from the group consisting of time information, traffic information, promotional information, and information related to items for sale (see col. 8, lines 15-31, col. 10, lines 25-39, and col. 15, lines 3-8).

Regarding claims 10 and 17, Goken teaches wherein the processor is programmable (see fig. 1a-b, processor 3, col. 8, lines 25-41).

Regarding claims 11 and 18, wherein the processor is hardwired (The examiner talk official notice, since the processor is an IC and the IC soldered to PC board of the radio receiver that is hardwired).

Regarding claims 12, 14, 23, 29 and 35, Goken teaches wherein the radio receiver includes a stand-by mode of operation, the standby mode operation storing and up-dating program indicia in the storage unit when program components are not being processed (see col. 9, line 47-col. 10, line 2).

Regarding claims 20 and 31, Goken teaches wherein the processor uses the indicia of the second signal stream and the new signal stream to determine the signal stream or the next program component to be applied to the interface unit (see col. 3, lines 6-54 and col. 8, line 65-col. 10, line 44).

Regarding claim 21, Goken teaches wherein the interface unit includes at least one of a speaker and a display unit (see fig. 1b, speaker 16 and a display unit 10).

Regarding claim 22, Goken teaches wherein the second receiver is tuned to a selected station, the second station transmitting a signal stream providing a schedule for program components for a plurality of stations (see col. 14, lines 25-44).

Regarding claim 27, Goken teaches wherein the indicia of the second signal stream identify characteristics of the program components of the first signal stream (see col. 12, lines 53-col. 13, line 25).

Regarding claim 36, Goken teaches a broadcast system (see figs. 1a-b, col. 1, lines 31-47) comprising: at least one transmitter unit (see col. 2, lines 4-57), the transmitter unit broadcasting two signal streams in over a given frequency band (see col. 2, lines 4-67, and col. 3, lines 6-12); a receiver unit (see fig. 1a-b), the receiver unit including: an antenna (see fig. 1b, antenna 1); a receiver train coupled to the antenna (see figs. 1a-b, receivers 5 and 6, coupled to the antenna 1), the receiver train being tuned to the given frequency band (see figs. 1a-b, tuner 2a-b, col. 3, lines 12-27), the receiver unit demodulating the two signal streams (see figs. 1a-b, col. 5, lines 41-col. 6, line 57); a storage unit (see fig. 1b, item 15); and a processor (see figs. 1a-b, processor 3), the processor separating the two signal streams into a program signal stream and an information signal stream (see figs. 1a-b, processor separating two input signal streams to receiver 5 and 6, and processor separating two output signal to display 10 for traffic/program information and speaker 16 for audio signal), the information stream including information concerning the program signal stream (see col. 7, lines 10-col. 8, line 64).

Regarding claim 37, Goken teaches wherein the information signal stream includes a schedule for the program signal stream, the receiver unit further including a storage unit, the schedule of the program signal stream being stored in the storage unit (see col. 10, lines 3-44).

Regarding claim 38, Goken teaches wherein the processor controls the frequency band to which the receiver train is tuned, the processor changing the frequency band to which the receiver train is tuned when the processor does not identify preselected indicia in the information signal stream (see fig. 3, col. 11, line 60-col. 12, line 30).

Regarding claim 39, Goken teaches wherein the preselected indicia identify program components in the program signal stream (see col. 14, lines 25-53).

Regarding claim 40, Goken teaches wherein the preselected indicia identify a class of program components (see col. 8, lines 48-col. 9, line 29).

Regarding claim 41, Goken teaches wherein the receiver unit has a stand-by mode, portions of the second signal stream being stored and up-dated in the storage unit when the program components are not being presented to the user (see col. 9, line 47-col. 10, line 2).

Regarding claim 42, Goken teaches wherein the receiver unit includes: a second receiver train, the second receiver train including a scannable tuner, the scannable tuner controlled by the processor; wherein the processor identifies indicia in the second frequency band (see fig. 1b, tuner 2b with conventionally, since it is conventional turner then it is inherently scan-able, and col. 7, lines 9-46).

Regarding claim 43, Goken teaches wherein the indicia in the second frequency band form a portion of a schedule of program components for the second frequency band (see col. 9, lines 47-61).

Regarding claim 45, Goken teaches wherein the receiver unit has a stand-by mode, indicia from the second receiver unit being stored and up-dated in the storage unit in the stand-by mode when program components are not being presented to the user (see col. 9, line 47-col. 10, line 2).

Regarding claim 46, Goken teaches in a digital radio receiver (see fig. 1a-b), a user interface (see fig. 1a-b, display 10 and speaker 16), the user interface comprising a output device for displaying information (see figs. 1a-b, and fig. 8, display 10 and 80), the information including at least one display selected from a group consisting of a list of broadcast stations matching predetermined user preferences, promotional advertising, scrolling text information, a scrolling program guide, a video display, and internet access (see col. 7, lines 55-64).

Regarding claim 48, Goken teaches further comprising an input device, the input device selected from the group consisting of touch screen, manually-activated knobs, voice response system, and a keyboard (see col. 15, lines 20-29 for the group consisting of touch screen).

Regarding claim 49, Goken teaches wherein the digital radio receiver has a processor coupled to the interface unit and a storage unit (see fig. 1b), the user interface permitting the

user to apply a first signal stream to the output device (see fig. 1b, display 10, traffic info and program info), the user interface permitting the user to apply a second signal stream to the storage unit (see fig. 1a, storage unit 15, col. 8, lines 14-46).

Regarding claim 50, Goken teaches a digital radio system including at least one transmitter and at least one receiver (see figs. 1a-b and fig. 6, col. 1, lines 31-47 and col. 2, lines 4-57), the transmitter broadcasting signals comprising at least one format selected from the group of formats consisting of; a program component signal stream and a program guide signal stream, a program guide signal stream and at least one business signal stream (see col. 2, lines 4-col. 4, lines 55), and at least one program content signal stream (see col. 4, lines 9-35), a program guide signal stream and at least one business signal stream (see col. 4, lines 36-55 and col. 7, lines 55-64).

Regarding claim 53, Goken teaches wherein the signal streams are implemented by a frequency division multiplexing the broadcast signal stream (see col. 6, lines 40-46).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 44, 47, 51-52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goken (U.S. Patent No. 5584051) in view of Noreen (U.S. Pub. No. 20020183059).

Regarding claim 47, Goken teaches wherein the radio receiver receives signals from a broadcast transmitter (see fig. 1a-b); the radio receiver further including apparatus permitting a return path to the broadcast transmitter; the return path permitting a user of the digital receiver to respond to the information displayed on the user interface (see fig. 1b, display 10); But Goken fails to teach the apparatus implementing the return path selected from the group consisting of a cellular phone, a Bluetooth to cellular link, a satellite link, and a microwave link; the return path permitting the user to engage in an activity selected from the group consisting of accessing the internet and the purchase of products.

However, Noreen teaches the apparatus implementing the return path selected from the group consisting of a cellular phone, a Bluetooth to cellular link, a satellite link, and a microwave link (see fig. 1, page 2, section [0011]); the return path permitting the user to engage in an activity selected from the group consisting of accessing the internet and the purchase of products (see fig. 1, page 2, section [0011]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Goken system and by the providing of the teaching of Noreen on the return path using the cellular phone or internet so that the user can be placed the order of the request to song or purchase of products when it advertisement on radio is easier.

Regarding claim 51, Goken fails to teach wherein a business signal stream can include promotional material or items offered for sale.

However, Noreen teaches wherein a business signal stream can include promotional material or items offered for sale (see fig. 1, page 1-2, sections [0004 and 0011]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Goken system and by the providing of the teaching of Noreen on business signal stream so that user can listen the advertisement on the air.

Regarding claim 52, Goken fails to teach wherein the signal streams are formed by time division multiplexing the broadcast signal stream.

However, Noreen inherently teaches the signal streams are formed by time division multiplexing the broadcast signal stream (see fig. 1, page 5, section [0046], since the interactive radio is using the satellite broadcaster, cellular phone that is using TDMA).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Goken system and by the providing of the teaching of Noreen on by time division multiplexing the broadcast signal stream so that the user can use the cellular phone to accessing and the purchase of products.

Regarding claim 44, wherein the indicia in the second frequency band cause the tuner in the receiver train to be tuned to the second frequency band (since this is a well known in the art, for the second frequency band the receiver train to be tuned to the second frequency band).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Goken (U.S. Patent No. 5584051) discloses Radio broadcast transmission system and receiver for incompatible signal formats, and method therefor.

Noreen(U.S. Pub. No. 20020183059). discloses Interactive system and method for use broadcast media .

8. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(571) 273-8300, (for Technology Center 2600 only)

Hand-delivered responses should be brought to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (571) 272-7888. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Nay Maung, can be reached at (571) 272-7882.

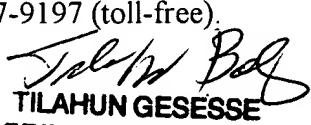
The fax phone number for the organization where this application or proceeding is assigned is **(571) 273-8300**.

Art Unit: 2684

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh 
Art Unit 2684
August 15, 2005

 8/15/05
TILAHUN GEESSE
PRIMARY EXAMINER